THE LONGEVITY OF THE FISH TAPEWORM OF MAN, *DIBOTHRIOCEPHALUS LATUS*

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While many species of tapeworms are known to be but short-lived within their host, it is well known that under favorable conditions others may live for a considerable period. This seems especially true of *Taenia saginata,* of which Leuckart says:

"The life of the present species seems to be very long. At any rate it is not at all rare for patients to evacuate proglottides almost daily for years. One of my Russian students harbored two tapeworms for more than five years. In another case the disease continued for more than eight years. Wawruch mentions several cases which lasted from twenty to twenty-five years, and in one case speaks even of thirty-five years."

There are also on record a number of cases of persisting infestation on man by the fish tapeworm, *Dibothriocephalus latus,* some of them evidently unquestionable, others complicated by the possibility of reinfection. Two cases in the clinical records of the University Hospital, Minneapolis, Minnesota, seem especially clear cut and of such interest as to jusitfy publication. For permission to use the data I am under obligations to Dean E. P. Lyon of the Medical School.

1. Mrs. X—, for four years a resident of Minneapolis, was admitted to the hospital July 12, where on August 24, she gave birth to a child. On August 31 it was noted that her stools contained segments of *D. latus* and ova of the same. September 1, after appropriate treatment, she evacuated a complete specimen, with head, of *D. latus.*

The patient was a Russian Jew who had left Russia some five years previously. She had been "troubled a good deal with gas on the bowels and cramps during the past five years."

2. Mrs. Y—, a Swedish woman, 43 years of age, was admitted to the University Hospital October 13, 1911, with a complication of diseases. On account of a high degree of eosinophilia which the patient maintained while in the hospital the possibility of parasitic infestation was suspected, and on examination of the stools many eggs of *D. latus* were found. Treatment was instituted and a worm recovered complete, after which the eosinophilia dropped from 25 to 2.8 per cent.

The records show that tapeworm segments were again found in the stools on February 18, 1912, and March 4, but no heads were found. The patient was discharged, but was readmitted July 3, 1912, with diagnosis of "*B. latus,* Addison's disease, tuberculosis of the lymph glands." After treatment, 15 cm. of the worm, but no head, were discharged. Eggs and segments continued to be noted in stools up to August 21, when, following treatment, some 20 m. of worms and *two* heads were discharged.

The patient stated that she had had worms since fifteen years of age. From the time when she first began to menstruate at the age of 14, she often noticed worm segments, and sometimes was able to extract long pieces of worm. The segments were of a very white color. One day she told her mother about it, but as they never bothered her, she neither consulted a doctor nor at any time took any medicine to expel the worm.

She was never ill until she was 29 years of age. It was at this time that she came to the United States from Sweden, and while aboard ship she became very sick. She vomited severely, the vomitus containing pieces of the tapeworm. The worms from which these segments were derived had not been expelled previous to the patient's entering the hospital.

Since coming to the United States she had lived for two years in Brooklyn, three years in Michigan, three years in Wisconsin and five years in Minnesota.

Though it is clear that the first infestation in this case occurred at least twenty-nine years previously, this, of course, does not prove that the age of the worms expelled was that great. Under appropriate conditions of environment and food habits, repeated infections may have occurred during the early life of the patient. The age of the worms recovered at the hospital was at least the thirteen years covered by the period of residence in this country — how much greater, it would be impossible to judge.

Concerning both of the cases here reported, it may be objected that there is evidence that *Dibothriocephalus latus* is endemic in some sections of this country. That this does not account for these cases seems evident from the extreme rarity of native infestation, the fact that both patients had lived in the large cities, rather than in the region of the suspected lakes, and especially from the clear history of infestation before coming to this country.